## THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH

66TH STREET AND YORK AVENUE NEW YORK 21, N.Y.

January 2nd, 1958

Dr. J. Lederberg Professor of Genetics University of Wisconsin Medical School Madison, Wiscensin

Dear Lederberg:

I am amusing myself trying to work up the thesis that the science of microbiology would have taken a very different course if it had used useful effects instead of harmful effects as criterion for selection of microorganisms.

I have had no difficulty, of course, finding examples in the world of bacteria and fungi. The situation is more difficult with reference to viruses. I have a couple of examples that suggest useful effects of viruses on plant growth. I can also mention effect of bacteriophage on toxin production or on antigenic constitution. As yet, I have not found anything suggesting that a virus can be of help to the animal that it infects. The only suggestion is the statement in your article in <u>Bacteriological Reviews</u>, September 1957, p. 134:

"Insects can be cured of their endosymbionts by antibiotics - to the detriment of the insect host."

Would you be good enough to direct me to the published material on which you base this statement?

Needless to say, I should be most thankful to you for any help and advice that you might give me in support of my thesis on the benevolent virus.

With warmest personal regards and season's greetings,

Yours sincerely,

Rue Subo

René J. Dubos

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RJD: jp